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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,516	03/25/2005	Bernard Deckers	2497/104	2735

2101 7590 10/19/2007
BROMBERG & SUNSTEIN LLP
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EXAMINER

UHLENHAKE, JASON S

ART UNIT	PAPER NUMBER
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2853

MAIL DATE	DELIVERY MODE
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10/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/506,516

Applicant(s)

DECKERS ET AL.

Examiner

Jason Uhlenhake

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on arguments filed 8/1/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities: dynes/cm are known to be units of surface tension not viscosity, the Examiner has taken the claim to read "...wherein the surface tension of the ink varies in a graduated manner..." (emphasis added). Appropriate correction is required.

Claim 13 is objected to because of the following informalities: m/min are known to be units of curing speed not viscosity, the Examiner has taken the claim to read "...wherein the curing speed of the ink varies in a graduated manner..." (emphasis added). Appropriate correction is required.

Claim 20 is objected to because of the following informalities: dynes/cm are known to be units of surface tension not viscosity, the Examiner has taken the claim to read "...wherein the surface tension of the ink varies in a graduated manner..." (emphasis added). Appropriate correction is required.

Claim 21 is objected to because of the following informalities: m/min are known to be units of curing speed not viscosity, the Examiner has taken the claim to read "...wherein the curing speed of the ink varies in a graduated manner..." (emphasis added). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Inui et al (U.S. Pat. 6,074,052).

Inui et al discloses:

- ***regarding claim 1***, applying a first ink drop to a substrate and subsequently applying a second ink drop on to the first ink drop without intermediate solidification of the first ink drop (Abstract; Column 3, Lines 28-36; Column 6, Lines 20-49)
- ***regarding claims 1 and 9***, the first and second ink drops have a different viscosity, surface tension or curing speed (Column 6, Lines 20-49; Column 7, Lines 54-59)
- ***regarding claim 14***, an ink dispenser holding a set of ink jet inks (Figure 1)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 10, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inui et al (U.S. Pat. 6,074,052) in view of Cleary et al (U.S. Pat. 6,457,823)

Inui et al does not disclose expressly the following:

- ***regarding claims 2-5, 10, 15,*** further ink drops are applied sequentially to the combined first and second ink drops without intermediate solidification of the first and subsequent ink drops; at least four ink drops are applied sequentially and wherein the first and subsequent ink drops are different colors; the ink drops are cyan, magenta, yellow, and black

Cleary et al discloses:

- ***regarding claims 2-5, 10, 15,*** further ink drops are applied sequentially to the combined first and second ink drops without intermediate solidification of the first and subsequent ink drops; at least four ink drops are applied sequentially and wherein the first and subsequent ink drops are different colors; the ink drops are cyan, magenta, yellow, and black (Column 4, Lines 12 – 51)

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Cleary into the device of Inui, for the purpose of printing images at a higher rate, resulting in a higher throughput

Claims 6-7, 11-12, 16-17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inui et al (U.S. Pat. 6,074,052) in view of Takemoto et al (U.S. Pat. 6,084,619).

Inui discloses:

- ***regarding claims 16-17, 19-20,*** applying a first ink drop to a substrate and subsequently applying a second ink drop on to the first ink drop without

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intermediate solidification of the first ink drop (Abstract; Column 3, Lines 28-36; Column 6, Lines 20-49)

Inui does not disclose the following:

- ***regarding claim 6, 11, 16, 19***, wherein the viscosity of the first to the last ink drops applied varies in a graduated manner within a range of from 10 up to 30 mPas or a range of from 30 down to 10 mPas

- ***regarding claims 7, 12, 17, 20***, the surface tension of the first to the last ink drops applied varies in a graduated manner within a range from 20 up to 40 dynes/cm or a range of from 40 down to 20 dynes/cm

Takemoto discloses:

- ***regarding claims 6, 11, 16, 19***, wherein the viscosity of the first to the last ink drops applied varies in a graduated manner within a range of from 10 up to 30 mPas or a range of from 30 down to 10 mPas (Column 3, Line 65 – Column 4, Line 17), the range of viscosity will change depending on the temperature of the ink. It is obvious depending on the temperature of the ink, that the range of the drop viscosity will also change and the ink drops applied to a substrate will be within the viscosity range.

- ***regarding claims 7, 12, 17, 20***, the surface tension of the first to the last ink drops applied varies in a graduated manner within a range from 20 up to 40 dynes/cm or a range of from 40 down to 20 dynes/cm (Column 3, Line 65 – Column 4, Line 17)

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Takemoto into the device of Inui, for the purpose of providing an image having a good quality (Abstract)

Claims 8, 13, 18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inui et al (U.S. Pat. 6,074,052) in view of Lin et al (U.S. Pat. 5,531,818)

Inui discloses:

- ***regarding claims 18, 21***, applying a first ink drop to a substrate and subsequently applying a second ink drop on to the first ink drop without intermediate solidification of the first ink drop (Abstract; Column 3, Lines 28-36; Column 6, Lines 20-49)

Inui does not disclose the following:

- ***regarding claims 8, 13, 18, 21***, wherein the cure speed of the first to the last ink drops applied varies in a graduated manner within a range of from 20 up to 70 m/min or a range of from 70 down to 20 m/min

Lin discloses:

- ***regarding claims 8, 13, 18, 21***, wherein the cure speed of the first to the last ink drops applied varies in a graduated manner within a range of from 20 up to 70 m/min or a range of from 70 down to 20 m/min (Column 12, Lines 5-25)

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Lin into the device of Inui, for the purpose of avoiding ink smearing and intercolor bleeding

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

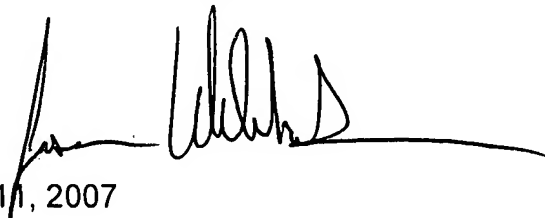
Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSU
October 11, 2007




JULIAN D. HUFFMAN
PRIMARY EXAMINER

10/14/07